

U.S. Patent Application Serial No. 09/631,000
Amendment dated February 1, 2008
Reply to Office Action of August 1, 2007

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Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently Amended) A method for creating a library of pump data on a computer having a database, the pump data being organized into sets of program data, each set of program data being available for batch downloading to a medical pump and including data items for controlling operation of the medical pump, the method comprising:
 - entering a plurality of data items into a database on the computer, the plurality of data items forming a set of program data, at least some of the data items being patient-specific data items ~~establishing patient specific parameters~~ for controlling operation of a medical pump;
 - assigning at least one data key to the set of program data, the data key identifying the set of program data;
 - batch-down loading the plurality of data items into memory within the pump, at least some of the data items batch-downloaded into memory being patient-specific data items;
 - and
 - controlling operation of the pump based on one or more of the data items.
2. (Original) The method of claim 1 wherein the acts of:
 - entering a plurality of data items into a database includes entering the plurality of data items into a program data record in the database; and
 - assigning at least one data key to the set of program data includes entering the data key into a data key record and linking the data key record to the program data record.
3. (Original) The method of claim 2 wherein the act of assigning at least one data key to the set of program data further includes: entering an identification code selected from the group consisting essentially of a patient I.D., a therapy I.D., and a fluid I.D., wherein the patient I.D. is a code identifying a patient, the therapy I.D. is a code identifying a therapy administered using a

U.S. Patent Application Serial No. 09/631,000
Amendment dated February 1, 2008
Reply to Office Action of August 1, 2007

medical pump, and the fluid I.D. is a code identifying a fluid that is administered using a medical pump.

4. (Original) The method of claim 3 wherein the computer is in data communication with a scanner, the method further comprising:

scanning a bar code with the scanner; and

entering the bar code into the computer,

wherein the act of assigning at least one data key to the set of program data includes assigning the bar code to the set of program data.

5. (Original) The method of claim 3 wherein the computer is in data communication with a medical pump, the method further comprising uploading a set of program data items from the pump.

6. (Currently Amended) A computer storage medium containing a library of pump data, the computer storage medium being created by the method set forth in claim 1.

7. (Currently Amended) An apparatus for maintaining a library of program data for medical pumps, the apparatus configured to interface with a medical pump having memory, the apparatus comprising:

memory loaded with a database, the database including a plurality of program data records and a plurality of data key records, each program data record containing a set of program data items, at least some of the program data items included in the database being patient-specific data items for controlling operation of a medical pump, each data key record containing a data key and each data key identifying one of the data program records;

a database management system programmed to link a data key to a set of program data and to batch download data to the memory within the medical pump, at least some of the program data batch-downloaded into memory being patient-specific data items.

U.S. Patent Application Serial No. 09/631,000
Amendment dated February 1, 2008
Reply to Office Action of August 1, 2007

8. (Original) The apparatus of claim 7 further comprising a scanner in data communication with the database management system, the database management system being further programmed to receive a code scanned by the scanner, save the code in a data key record, and link the code to a set of program data, the code being a data key.

9. (Original) The apparatus of claim 7 further comprising a medical pump, the medical pump storing a set of program data, the database management system being further programmed to receive the set of program data from the medical pump and save the set of program data as a record in the database.

10. (Currently Amended) An apparatus for batch programming a medical pump having memory, the apparatus comprising:

memory loaded with a database, the database including a plurality of program data records and a plurality of data key records, each program data record containing a set of program data items, at least some of the program data items included in the database being patient-specific data items and for controlling operation of a medical pump, each data key record containing a data key and each data key identifying one of the data program records;

a data output configured for data communication with a programmable medical pump;

and

a processor in electrical communication with the memory and the data output, the processor configured to retrieve a set of program data from the database and batch download the set of program data to the memory within the medical pump, at least some of the program data batch-downloaded into memory being patient-specific data items.

11. (Original) The apparatus of claim 10 further comprising a serial communication cable connected to the data output.

12. (Original) The apparatus of claim 10 further comprising a medical pump in data communication with the data output.

U.S. Patent Application Serial No. 09/631,000
Amendment dated February 1, 2008
Reply to Office Action of August 1, 2007

13. (Original) The apparatus of claim 10 wherein each data key record includes first and second fields, the first field for storing an identification code and the second field for storing a name in prose.
14. (Original) The apparatus of claim 10 wherein each data key record includes fields for a patient I.D., a therapy I.D., and a fluid I.D.
15. (Currently Amended) The apparatus of claim 10 wherein the processor is programmed: to generate a user interface, the user interface including a plurality of graphical fields for program data and to permit.
16. (Currently Amended) A method for batch programming a medical pump having memory, the method comprising:
selecting a set of program data, the set of program data including patient-specific data items for controlling operation of a medical pump; and
batch downloading the set of program data to the memory within medical pump, at least some of the program data batch-downloaded to the memory being patient-specific program data, wherein the set of program data is downloaded to the medical pump without intervening action by a user after the first data item is downloaded to the computer.
17. (Original) The method of claim 16 wherein an information management system is loaded on a computer and the information management system includes a database storing a plurality of data keys and a plurality of program data sets, and wherein the act of selecting a set of program data comprises:
entering a data key into the information management system;
referencing the data key to a program data set; and
and retrieving the referenced program data set from the database.
18. (Original) The method of claim 17 wherein the act of entering a data key includes scanning a bar code.

U.S. Patent Application Serial No. 09/631,000
Amendment dated February 1, 2008
Reply to Office Action of August 1, 2007

19. (Currently Amended) The method of claim 16 wherein an information management system is loaded on a computer and the information management system includes a database storing a plurality of data keys and a plurality of program data sets and the act of batch downloading the set of program data includes downloading the set of program data from the computer to the medical pump, the method further comprising:

uploading the set of program data from the medical pump to the computer after it is downloaded to the medical pump;

comparing the set of program data that was downloaded to the medical pump to the set of program data that was uploaded from the medical pump; and

generating an error if the set of program data that was downloaded from the medical pump is not identical to the program data that was uploaded from the medical pump.

20. (Cancelled) A propagated signal on a carrier detectable by a computing system and encoding a set of program data for controlling operation of a medical pump, the propagated signal being encoded according to the method of claim 16.

21. (Withdrawn) The apparatus of claim 10 wherein the data key record includes a field, the field for storing a patient name.

22. (Withdrawn) The apparatus of claim 21 wherein the data key record further includes an additional field, the additional field for storing a patient I.D.

23. (Previously Presented) The apparatus of claim 10 wherein the data key record includes a field, the field for storing a therapy name.

24. (Previously Presented) The apparatus of claim 23 wherein the data key record includes an additional field, the additional field for storing a therapy I.D.

25. (Withdrawn) The apparatus of claim 10 wherein the data key includes a field, the field for storing a unique set of characters.

26. (Currently Amended) A pump for infusing fluid into a patient, the pump comprising:

U.S. Patent Application Serial No. 09/631,000
Amendment dated February 1, 2008
Reply to Office Action of August 1, 2007

a housing;
a pump mechanism positioned within the housing;
memory positioned within the housing and configured to store a plurality of data items forming a set of program data, at least some of the data items being patient-specific data items establishing patient-specific parameters for controlling operation of a medical pump;
a first program module programmed to receive a batch download of the plurality of data items, at least some of the data items batch-downloaded being patient-specific data items; and
a second program module programmed to control operation of the pump mechanism according to the batch downloaded plurality of data items at least some of the batch-downloaded data items controlling operation of the pump being patient-specific data items.

27. (Previously Presented) The pump of claim 26 wherein the data includes data selected from the group comprising: delivery rate for patient, bolus amount for patient, time between boluses for patient, limit of volume delivered to patient, age of patient, weight of patient, delivery schedule for patient, dose requirements for patient, parameters limiting the size and frequency of boluses of patient.

28. (Previously Presented) The pump of claim 26 wherein the program data identifies a therapy name.

29. (Previously Presented) The pump of claim 26 wherein the program data includes a data key.

30. (Previously Presented) The pump of claim 26 wherein the first and second program module include code executable by a processor.

31. (Previously Presented) The pump of claim 26 wherein the first and second program modules comprise program code.

U.S. Patent Application Serial No. 09/631,000
Amendment dated February 1, 2008
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32. (Currently Amended) The method of claim 1 wherein the plurality of data items includes at least one data item selected from the group consisting of data items related to delivery schedules, medication doses, and boluses.